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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,259	05/31/2000	Marcos N. Novaes	POU9-2000-0003-USI	5275

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ALBANY, NY 12203

EXAMINER

WON, MICHAEL YOUNG

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/584,259

Applicant(s)

NOVAES ET AL

Examiner

Michael Y. Won

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. In view of the appeal brief filed on November 3, 2004, PROSECUTION IS  
HEREBY REOPENED.

To avoid abandonment of the application, appellant must exercise one of the  
following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply  
under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied  
by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130,  
1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. Claims 1-49 have been examined and are pending with this action

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that  
form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Shrivastava et al. (US 6449734 B1)

INDEPENDENT:

As per claim 1, 3, and 5, Shrivastava teaches a method, a system (see title), and at least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method (see col.1, lines 15-16), of managing processing groups of a distributed computing environment (see col.1, lines 12-14), said method comprising: comparing at least a portion of an individual prospective member state of a prospective member of a processing group with at least a portion of a group state of the processing group, said individual prospective member state comprising state defined for the individual prospective member (see col.11, lines 13-17 & 58-61); updating said at least a portion of the individual prospective member state, should said comparing indicate a difference (see col.5, lines 46-53); and joining said prospective member to said processing group,

in response to said updating (implicit: see col.5, lines 53-57: if a system is not removed, it is joined).

As per claims 22, 24, and 26, Shrivastava teaches a method, a system (see title), and at least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method (see col.1, lines 15-16), of managing processing groups of a distributed computing environment (see col.1, lines 12-14), the system comprising: means for detecting a failure of at least one member of a processing group (see col.1, lines 18-21); means for quiescing activity to a group state of the processing group (see col.12, lines 13-21); and means for updating at least a portion of the group state in order to exclude the at least one member of the processing group (see abstract and col.7, lines 41-44 & 52-57), wherein the updating comprises updating a sequence number of the group state (see abstract), said sequence number identifying a version of the processing group (implicit: see col.13, lines 37-60).

As per claims 28, 35, and 42, Shrivastava teaches a method, a system (see title), and at least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method (see col.1, lines 15-16), of managing processing groups of a distributed computing environment (see col.1, lines 12-14), the method comprising: joining a prospective member to an inactive processing group (see col.11, lines 31-40); comparing at least a portion of an individual prospective member state with at least a portion of a group state of the processing group, said individual prospective member state comprising state

defined for the individual prospective member (see col.11, lines 13-17 & 58-61); and updating the at least a portion of the group state (see col.5, lines 46-53).

DEPENDENT:

As per claims 2, 4, and 6, Shrivastava teaches of further comprising: quiescing activity to said group state (see col.12, lines 13-21); and retrieving said group state after quiescing activity, for use in said comparing (see col.11, lines 58-61).

As per claims 7, 12, 17, 29, 36, and 43, Shrivastava further teaches wherein the individual prospective member state comprises a sequence number of the prospective member, and wherein the comparing comprises comparing the sequence number of the prospective member with a sequence number of the processing group (see col.12, line 66-col.13, line 3 and col.13, lines 37-60).

As per claims 8, 13, 18, 30, 37, and 44, Shrivastava further teaches wherein the sequence number of the prospective member is less than the sequence number of the processing group (see col.13, lines 46-50: it is inherent that a prospective member does not belong to a group, thus has a sequence number less than the group sequence number, that has more than one member to form such a group), and wherein the updating comprises updating the sequence number of the prospective member with the sequence number of the processing group (see col.13, lines 50-54).

As per claims 9, 14, and 19, Shrivastava teaches of further comprising determining an activity status of the processing group prior to the updating (see col.1, lines 31-35 and col.11, lines 38-46), wherein updating the sequence number of the

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prospective member comprises updating if the processing group is active (see col.13, lines 50-60).

As per claims 10, 15, and 20, Shrivastava teaches of further comprising updating at least a portion of the state of the processing group after the joining (see col.1, lines 42-50).

As per claims 11, 16, and 21, Shrivastava further teaches wherein the updating at least a portion of the state of the processing group after the joining comprises updating the sequence number (see Fig.2A: SN# and col.13, lines 61-63) of the processing group (see col.12, line 66-col.13, line 3 and col.13, lines 37-60).

As per claims 23, 25, and 27, Shrivastava further teaches wherein the quiescing and updating are performed if the processing group is active (see col.5, lines 53-57) and the at least one member of the processing group comprises less than a majority of the processing group (implicit upon failure).

As per claims 31, 38, and 45, Shrivastava further teaches wherein the updating comprises updating the sequence number of the group state with a highest sequence number of the members of the processing group if a quorum (see col.11, lines 51-54) of the processing group exists (see Fig.2A-2C and col.13, lines 46-50).

As per claims 32, 39, and 46, Shrivastava teaches of further comprising activating the processing group (see col.11, lines 20-23).

As per claims 33, 40, and 47, Shrivastava further teaches wherein the activating comprises updating a local copy of the group state for any member of the processing

group whose sequence number is less than a current sequence number of the processing group (see col.5, lines 46-53 and col.13, lines 37-60).

As per claims 34, 41, and 48, Shrivastava further teaches wherein the activating further comprises changing the group state (see col.12, line 66-col.13, line 3) to active if a majority of the members of the processing group have a sequence number matching the current sequence number and none of the members has aborted (see col.13, lines 53-54: "surviving").

As per claim 49, Shrivastava further teaches wherein the sequence number of the prospective member identifies a version of a proposed processing group to join (see abstract).

### ***Response to Arguments***

4. Applicant's arguments presented in the appeal brief filed November 3, 2004, regarding claims 1-21 and 28-49 have been considered but are moot in view of the new ground(s) of rejection. As a result of the appeal conference, it has been determined that *Moiin* (US 6,108,699 A) did not teach each and every limitations in the claims recited, however, *Shrivastava* et al. (US 6,449,734 B1) clearly and explicitly teaches the limitations (see rejections above).

In response to the arguments regarding claims 22-27, although *Shrivastava* teaches of a sequence number is associated with a particular transaction, *Shrivastava* explicitly teaches that the log file is a "precise state of the previous cluster" (see col.12,

line 64 to col.13, line 3), therefore whenever the processing group of the cluster is changed, the sequence number also "adjusted (incremented or decremented)" to represent the current cluster so that "the sequence number is the same in all surviving nodes" (see col.13, lines 46-54).

As reference and explained above, clearly the failure or exclusion is indicated by an update of the group state (i.e. log file) by decrementing the sequence number from a previous sequence number or if the transaction is not replicated, the sequence number remains the same (see also col.14, lines 53-63).

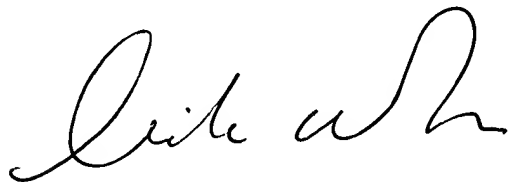
For the reason above claims 22-27 remain rejected as being anticipated by *Shrivastava*.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y. Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Won



April 22, 2005



HOSAIN ALAM  
SUPERVISORY PATENT EXAMINER